Having thus described the invention, it is claimed:

1. A spring system comprising a housing having an axis, an internal chamber, and axially opposite bottom and top ends, a rod member coaxial with said axis and positioned within said internal chamber and having an inner end in said housing and an outer end axially outwardly of said top end, a guide member on said inner end of said rod member supporting said rod member for reciprocation axially of said housing between retracted and extended positions relative thereto, and first and second compression springs each extending between said guide member and the bottom end of said housing, said first and second springs being coaxial with one another and with said axis, said guide member dividing said internal chamber into at least two sub-chambers, said guide member including a first passageway that at least partially regulates fluid flow between said at least two sub-chambers during said reciprocation of said rod member.

2. The spring system as defined in claim 1, wherein the direction of winding of said first compression spring is opposite to the direction of winding of said second compression spring.

3. The spring system as defined in claim 1, wherein the free length of said first compression spring is different from the free length of said second compression spring.

4. The spring system as defined in claim 2, wherein the free length of said first compression spring is different from the free length of said second compression spring.

5. The spring system as defined in claim 1, wherein the outside diameter of said first compression spring is less than the outside diameter of said second compression spring.

6. The spring system as defined in claim 2, wherein the outside diameter of said first compression spring is less than the outside diameter of said second compression spring.

7. The spring system as defined in claim 4, wherein the outside diameter of said first compression spring is less than the outside diameter of said second compression spring.

8. The spring system as defined in claim 2, wherein the wire diameter of said first compression spring is less than the wire diameter of said second compression spring.

9. The spring system as defined in claim 7, wherein the wire diameter of said first compression spring is less than the wire diameter of said second compression spring.

10. The spring system as defined in claim 1, wherein the wire diameter of said first compression spring is less than the wire diameter of said second compression spring.

11. The spring system as defined in claim 1, wherein the outside diameter and wire diameter of said first compression spring are respectively less than the outside diameter and wire diameter of said second compression spring.

12. The spring system as defined in claim 2, wherein the outside diameter and wire diameter of said first compression spring are respectively less than the outside diameter and wire diameter of said second compression spring.

13. The spring system as defined in claim 10, wherein the outside diameter and wire diameter of said first compression spring are respectively less than the outside diameter and wire diameter of said second compression spring.

14. The spring system as defined in claim 1, wherein said first passageway in said guide member includes a one way valve arrangement.

15. The spring system as defined in claim 2, wherein said first passageway in said guide member includes a one way valve arrangement.

16. The spring system as defined in claim 12, wherein said first passageway in said guide member includes a one way valve arrangement.

17. The spring system as defined in claim 1, wherein said guide member includes a second passageway.

18. The spring system as defined in claim 14, wherein said guide member includes a second passageway.

19. The spring system as defined in claim 2, wherein said guide member includes a second passageway.

20. The spring system as defined in claim 16, wherein said guide member includes a second passageway.

21. The spring system as defined in claim 14, wherein said guide member includes a second passageway.

22. The spring system as defined in claim 17, wherein said second passageway has a maximum fluid flow rate that is less than a maximum fluid flow rate of said first passageway.

23. The spring system as defined in claim 18, wherein said second passageway has a maximum fluid flow rate that is less than a maximum fluid flow rate of said first passageway.

24. The spring system as defined in claim 19, wherein said second passageway has a maximum fluid flow rate that is less than a maximum fluid flow rate of said first passageway.

25. The spring system as defined in claim 20, wherein said second passageway has a maximum fluid flow rate that is less than a maximum fluid flow rate of said first passageway.

26. The spring system as defined in claim 21, wherein said second passageway has a maximum fluid flow rate that is less than a maximum fluid flow rate of said first passageway.

27. The spring system as defined in claim 1, wherein said bottom end is sealed to substantially prevent fluid flow through said bottom end.

28. The spring system as defined in claim 25, wherein said bottom end is sealed to substantially prevent fluid flow through said bottom end.

29. The spring system as defined in claim 1, wherein said top end is sealed to substantially prevent fluid flow through said bottom end.

30. The spring system as defined in claim 25, wherein said top end is sealed to substantially prevent fluid flow through said bottom end.

31. The spring system as defined in claim 27, wherein said top end is sealed to substantially prevent fluid flow through said bottom end.

32. The spring system as defined in claim 28, wherein said top end is sealed to substantially prevent fluid flow through said bottom end.

33. The spring system as defined in claim 1, wherein said top end includes a passageway to allow for a controlled rate of fluid flow to exit said internal chamber as said rod member moves to said extended position.

34. The spring system as defined in claim 25, wherein said top end includes a passageway to allow for a controlled rate of fluid flow to exit said internal chamber as said rod member moves to said extended position.

35. The spring system as defined in claim 27, wherein said top end includes a passageway to allow for a controlled rate of fluid flow to exit said internal chamber as said rod member moves to said extended position.

36. The spring system as defined in claim 28, wherein said top end includes a passageway to allow for a controlled rate of fluid flow to exit said internal chamber as said rod member moves to said extended position.

37. The spring system as defined in claim 33, wherein said passageway in said top end is spaced from said rod member.

38. The spring system as defined in claim 36, wherein said passageway in said top end is spaced from said rod member.

39. The spring system as defined in claim 33, wherein said passageway in said top end is adjacent to said rod member.

40. The spring system as defined in claim 36, wherein said passageway in said top end is adjacent to said rod member.

41. The spring system as defined in claim 1, including a bushing at said top end to support said rod for reciprocation axially of said housing between retracted and extended positions relative thereto.

42. The spring system as defined in claim 1, including a guide rod that extends from said guide member toward said bottom end coaxial with said axis and said first compression spring surrounds said guide rod.

43. The spring system as defined in claim 1, including at least a third compression spring, said third compression spring extending between said guide member and said bottom end of said housing coaxial with said axis.

44. The spring system as defined in claim 1, including at least a third compression spring, said third compression spring extending between said guide member and said top end of said

housing coaxial with said axis.

45. The spring system as defined in 44, wherein a direction of winding of said first and third compression springs is opposite to a direction of winding of said second compression spring.

46. The spring system as defined in claim 44, wherein a length of said first and third compression springs are the same.

47. The spring system as defined in 44, wherein outside diameters of said first and third compression springs are less than an outside diameter of said second compression spring.

48. The spring system as defined in claim 44, wherein an outside diameter and wire diameter of said first and third compression springs is less respectively than an outside diameter and wire diameter of said second compression spring.

49. A method of controlling the rate of extension and retraction of a spring rod of a spring system comprising:

providing a housing having a longitudinal axis, an internal chamber, and axially opposite bottom and top ends, said spring rod coaxial with said axis and positioned within said internal chamber, said spring rod having an inner end in said housing and an outer end axially outwardly of said top end;

providing a guide member positioned on said inner end of said spring rod, said guide member supporting said rod member for reciprocation axially in said housing between a retracted and an extended position relative thereto, said guide member dividing said internal chamber into at least upper and lower sub-chambers;

providing first and second compression springs each extending between said guide member and the bottom opposite end of said housing, said first and second springs being coaxial with one another and with said axis;

at least partially controlling the rate of retraction of said spring rod by selecting the spring rate of at least one of said compression springs; and,

at least partially controlling the rate of extension of said spring rod by at least partially regulating a fluid flow rate between said sub-chambers.

50. The method as defined in claim 49, wherein said guide member includes a first passageway that at least partially regulates fluid flow between said upper and lower sub-chambers during said extension of said spring rod.

51. The method as defined in claim 50, wherein said first passageway includes a one way valve arrangement.

52. The method as defined in claim 50, wherein said one way valve substantially prevents fluid flow from said upper sub-chamber to said lower sub-chamber during said extension of said spring rod.

53. The method as defined in claim 50, wherein said guide member includes a second passageway.

54. The method as defined in claim 52, wherein said guide member includes a second passageway.

55. The method as defined in claim 53, wherein said second passageway has a maximum fluid flow rate that is less than a maximum fluid flow rate of said first passageway.

56. The method as defined in claim 54, wherein said second passageway has a maximum fluid flow rate that is less than a maximum fluid flow rate of said first passageway.

57. The method as defined in claim 49, wherein said bottom end of said housing substantially prevents fluid flow through said bottom end to an exterior of said housing.

58. The method as defined in claim 53, wherein said bottom end of said housing

substantially prevents fluid flow through said bottom end to an exterior of said housing.

59. The method as defined in claim 56, wherein said bottom end of said housing substantially prevents fluid flow through said bottom end to an exterior of said housing.

60. The method as defined in claim 49, wherein said top end of said housing substantially prevents fluid flow through said top end to an exterior of said housing.

61. The method as defined in claim 58, wherein said top end of said housing substantially prevents fluid flow through said top end to an exterior of said housing.

62. The method as defined in claim 59, wherein said top end of said housing substantially prevents fluid flow through said top end to an exterior of said housing.

63. The method as defined in claim 49, wherein said top end includes a top passageway to allow a controlled rate of fluid flow to exit said upper sub-chamber as said spring member moves to said extended position.

64. The method as defined in claim 58, wherein said top end includes a top passageway to allow a controlled rate of fluid flow to exit said upper sub-chamber as said spring member moves to said extended position.

65. The method as defined in claim 59, wherein said top end includes a top passageway to allow a controlled rate of fluid flow to exit said upper sub-chamber as said spring member moves to said extended position.

66. The method as defined in claim 63, wherein top passageway is spaced from said spring rod.

67. The method as defined in claim 64, wherein top passageway is spaced from said

spring rod.

68. The method as defined in claim 65, wherein top passageway is spaced from said spring rod.

69. The method as defined in claim 63, wherein top passageway is adjacent to said spring rod.

70. The method as defined in claim 64, wherein top passageway is adjacent to said spring rod.

71. The method as defined in claim 65, wherein top passageway is adjacent to said spring rod.

72. The method defined in claim 49, wherein a direction of winding of said first compression spring is opposite to a direction of winding of said second compression spring.

73. The method as defined in claim 49, wherein a free length of said first compression spring is different from a free length of said second compression spring.

74. The method ss defined in claim 49, wherein an outside diameter of said first compression spring is less than an outside diameter of said second compression spring.

75. The method as defined in claim 49, wherein a wire diameter of said first compression spring is less than a wire diameter of said second compression spring.

76. The method as defined in claim 40, including a bushing at said top end of said housing to support said rod for reciprocation axially of said housing between retracted and extended positions relative thereto.

77. The method as defined in claim 49, including a guide rod that extends from said guide member toward said bottom end coaxial with said axis and said first compression spring surrounds said guide rod.

78. The method as defined in claim 49, including at least a third compression spring, said third compression spring extending between said guide member and said bottom end of said housing coaxial with said axis.

79. The method as defined in claim 49, including at least a third compression spring, said third compression spring extending between said guide member and said top end of said housing coaxial with said axis.

80. The method as defined in claim 79, wherein a direction of winding of said first and third compression springs is opposite to a direction of winding of said second compression spring.

81. The method as defined in claim 79, wherein a length of said first and third compression springs are the same.

82. The method as defined in claim 79, wherein an outside diameter of said first and third compression springs are less than an outside diameter of said second compression spring.

83. The method as defined in claim 79, wherein an outside diameter and wire diameter of said first and third compression springs is less respectively than an outside diameter and wire diameters of said second compression spring.